

UNCLASSIFIED

appr.
SEP 8 1961

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW	
1 st Review Date: <u>7/13/98</u>	Classification (Circle Numbers):
Authority: <input type="checkbox"/> ADC <input checked="" type="checkbox"/> ADD	1. Classification Retained
Name: <u>W.C. Lane</u>	2. Classification Changed to <u>U</u>
2 nd Review Date: <u>7/13/98</u>	3. Contains No DOE Classified Information
Authority: <u>APB</u>	4. Copywrite With: <u>XX</u>
Name: <u>R.B. Craner</u>	5. Contains UCAI? <u>XX</u>
	6. Comments: <u>216/rdp/mt</u>

File TX-53, 3-2
 File No: TX-53, 3-2
 T-17714
 Date Completed: 4-19-61

MR. E. I. BRUCE - 7117
 Attn: C. W. Moses

Re: Explosive Test of Rear Cover Plate Deployment TX-53 (U)

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CENTRAL RECORD FILE

Summary of Test

Tests were conducted to determine the minimum energy MDF that would effectively deploy the rear cover plate from the TX-53 afterbody. From these tests it was found that 12gr/ft MDF would deploy the cover satisfactorily, however, the inner flange of the MDF groove still sheared off.

Object of Test

The object of this test was to determine the minimum energy MDF that will effectively deploy the cover plate from the TX-53 afterbody.

Authorization for Test

This test was requested in a Work Order Authorization from E. I. Bruce 7117 to E. H. Copeland, 7321, dated 4-12-61. D. K. Buchanan, 7321 was the test project engineer.

Setup for Test

Setup for the test runs is shown in Fig. 1.

Seven and 12gr/ft MDF was used in these tests with a Dupont X257D detonator to detonate the MDF.

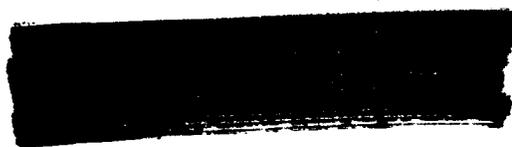
No instrumentation was used.

Procedure

Three test runs were made at the small explosive site in Are III. Test No. 1 and 2 used 7gr/ft MDF to deploy the cover. Test No. 3 used 12gr/ft MDF to deploy the cover.

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SANDIA SYSTEMATIC DECLASSIFICATION REVIEW DOWNGRADING OR DECLASSIFICATION STAMP	
CLASSIFICATION CHANGED TO: <u>U</u>	AUTHORITY: <u>R.B. Craner</u>
PERSON CHANGING MARKING & DATE: <u>Emelda Selph 7/21/98</u>	RECORD ID: <u>98SN2882</u>
PERSON VERIFYING MARKING & DATE: <u>W.C. Lane 7/22/98</u>	DATED: <u>7/13/98</u>



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Mr. E. I. Bruce - 7117

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T-17714

Results

The results of Test No. 1 are shown in Fig. 2.

In Test No. 1 the cover did not deploy, only 6 out of 16 bolts sheared thru the counter-sunk flange on the shear ring. When checking the two remaining shear rings, it was found that the counter-sunk flange was over size .015". In Test No. 2 the over size flange was corrected and the cover was deployed. The results of Test No. 2 are shown in Fig. 3. In Test No. 3 the over size flange was again corrected and the cover deployed satisfactorily, however, the inner flange of the MDF groove was sheared off. The results of Test No. 3 are shown in Fig. 4.

Conclusions and Recommendations

From these tests it was concluded that the 12gr/ft MDF would deploy the cover satisfactorily. 7gr/ft MDF would deploy the cover, however, it was not deployed with sufficient energy. A modification will have to be made to stop the inner flange of the MDF groove from shearing.

William V. Hoffman
W. HOFFMAN - 7321-1

Dale Buchanan
7321 Project Engineer: DALE BUCHANAN - 7321-5

R. S. Hooper
Approved By: R. S. HOOPER - 7321-5

WH:ew

Encl: Figs. 1 thru 4

Copy to:

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Attn: D. F. Mitchell

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REAR COVER PLATE

MDF HOUSING

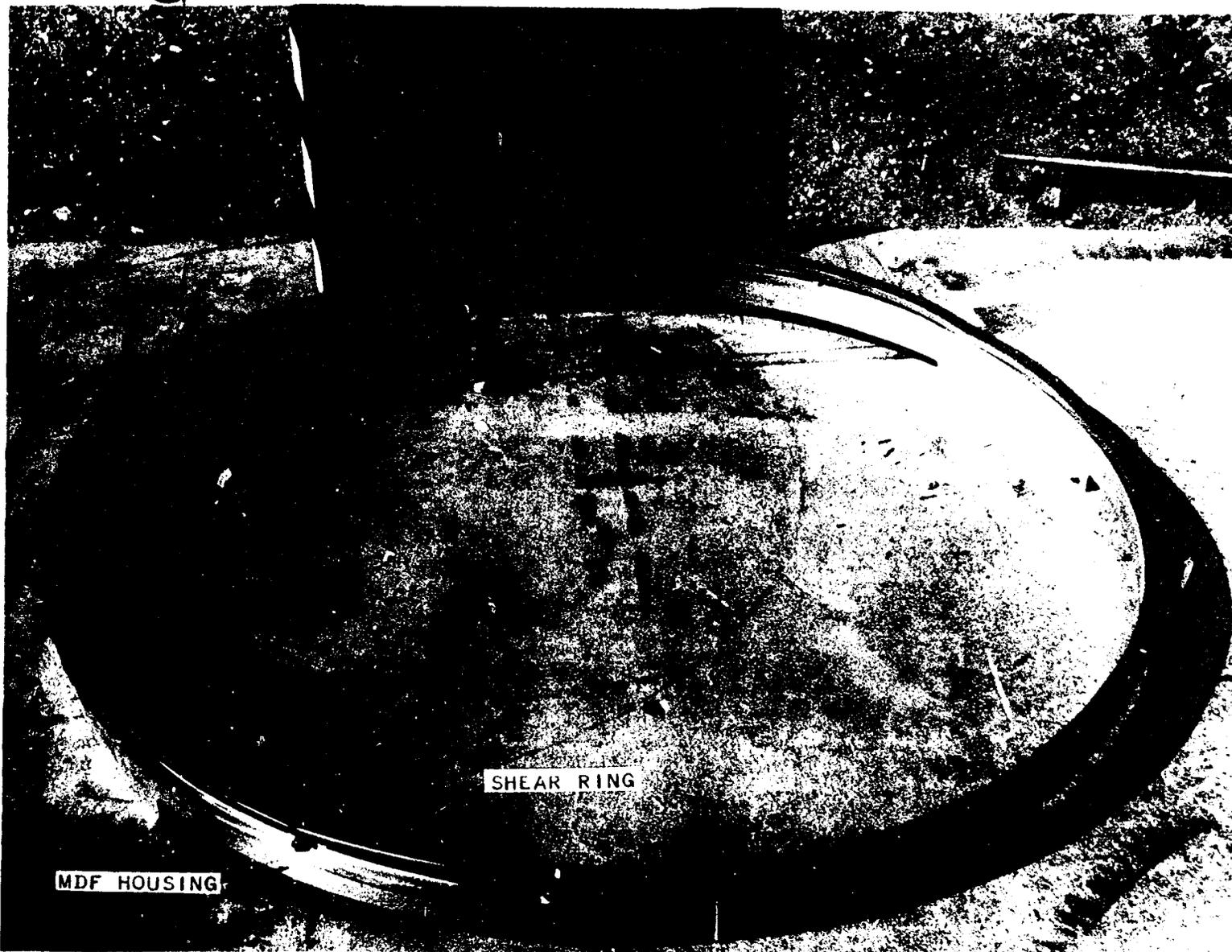
FIGURE 1 - SETUP FOR TEST NO'S. 1, 2, AND 3 -- EFFECTIVE TEST OF COVER PLATE DEPLOYMENT, TX-53 PROJECT W. 1-1-1974

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SHEAR RING

MDF HOUSING

FIGURE 2 - RESULTS AFTER TEST NO. 1 -- EXPLOSIVE TEST OF COVER PLATE DEPLOYMENT,
TX-53

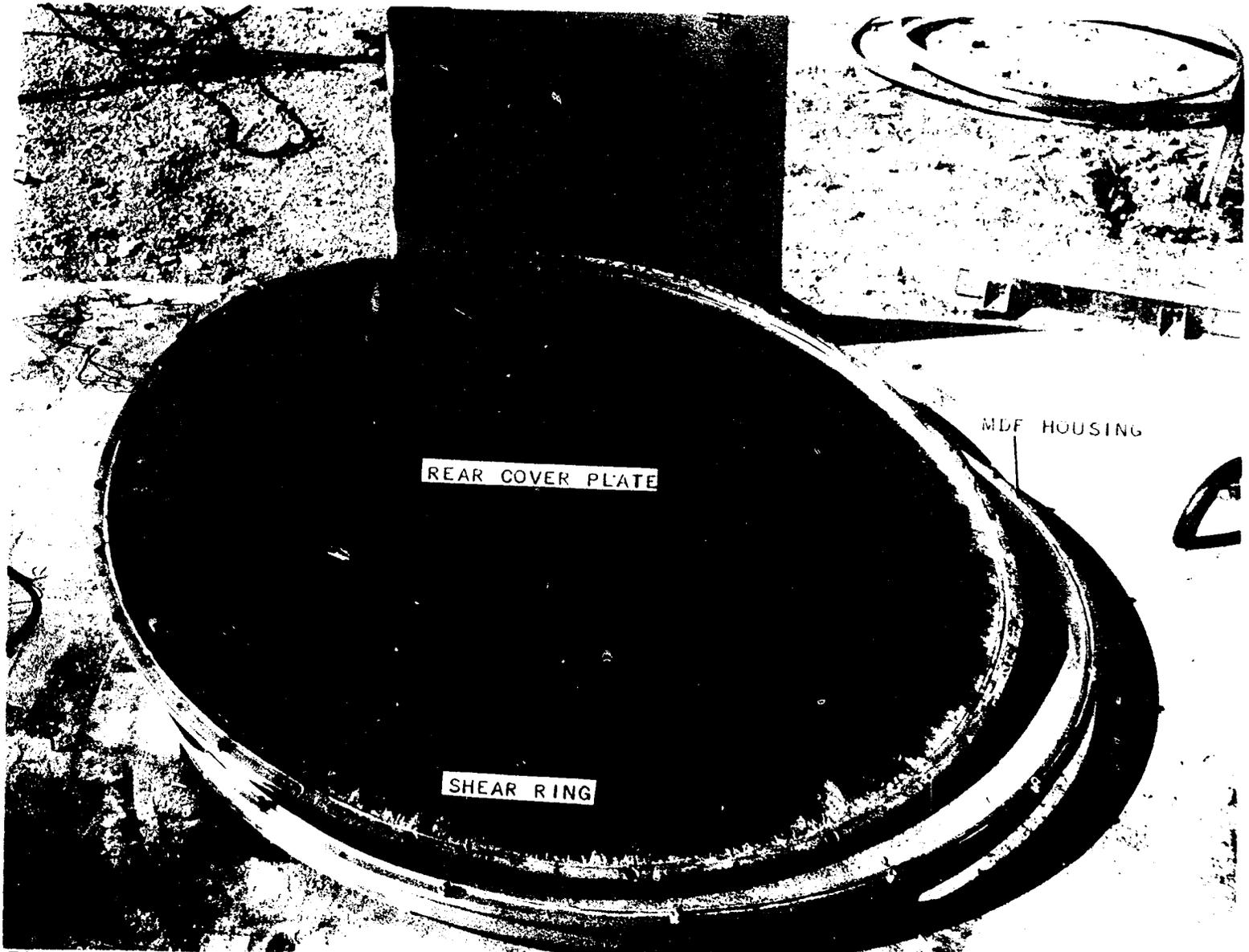
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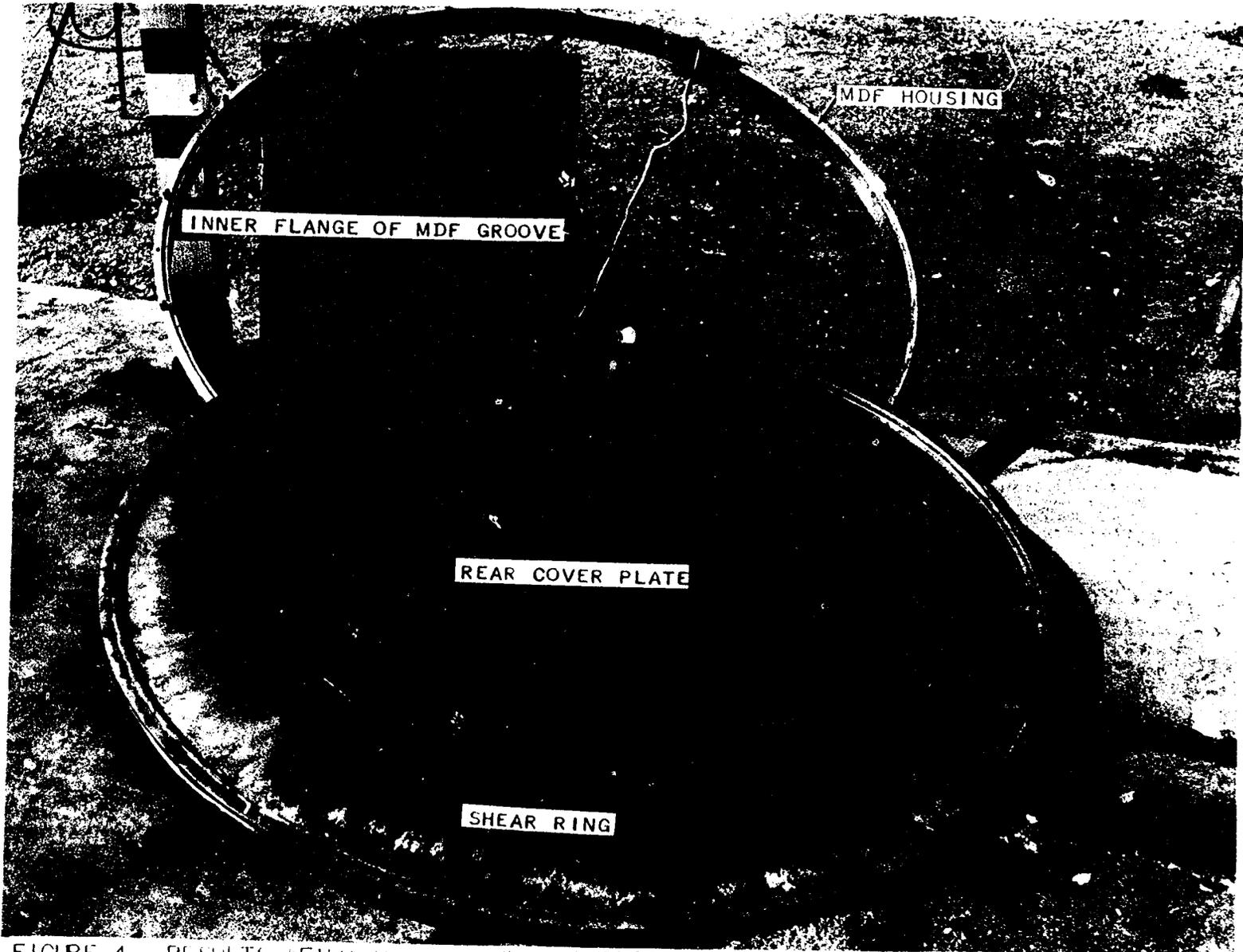
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FIGURE 3 - RESULTS AFTER TEST NO. 2 -- EXPLOSIVE TEST OF COVER PLATE DEPLOYMENT, TX-53

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FIGURE 4 - RESULTS AFTER TEST NO. 3 -- EXPLOSIVE TEST OF COVER PLATE DEPLOYMENT, TX-53

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